

Establishment Inspection Report

Medrad Inc
Indianola, PA 15051-9759

FEI: 2520313
EI Start: 08/23/2011
EI End: 08/23/2011

SUMMARY

Inspection of this manufacturer of class II medical devices (angiographic injectors / syringes, I/V administration sets, fluid delivery tubing, infusion pumps, physiological monitors) was conducted as follow-up to a May 17, 2011 Warning Letter issued to Medrad, Inc. (FACTS Assignment # 1318567). The Warning Letter was issued following a series of inspections of local Medrad manufacturing facilities which share a common Quality Management System. The January 2011 inspections revealed potential part 806 compliance issues, resulting in a referral of the EIR for this site to CDRH for comment and appropriate action. Subsequent review by CDRH resulted in issuance of the May 17, 2011 Warning Letter, which cited failure to comply with the requirements of 21 CFR 806.10(a)(b) as they relate to field corrections undertaken to the firm's Avanta injection system and associated disposables. The firm promised corrections, including submittal of a CAR report to Philadelphia district, and establishment of internal procedural corrections intended to ensure future compliance.

The current inspection revealed that the firm has established the promised procedural corrections, and that the modified SOPs appear to conform to the requirements of 21 CFR part 806. The firm stated that they had completed the relevant Avanta field corrections domestically, and would be seeking closure through the PHI-DO R&E coordinator shortly.

No FDA 483 was issued at the conclusion of this inspection. The firm expressed a strong interest in receiving written confirmation of closure of the Warning Letter as soon as is appropriate.

ADMINISTRATIVE DATA

Inspected firm:	Medrad Inc
Location:	1 Medrad Dr Indianola, PA 15051-9759
Phone:	412-767-2400
FAX:	
Mailing address:	One Medrad Drive Indianola, PA 15051
Dates of inspection:	8/24/2011
Days in the facility:	1
Participants:	James M. O'Donnell, Investigator

This inspection was pre-announced by telephone approximately 8 days prior to start.

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HISTORY

Medrad was founded in the mid 1960s as a developer and manufacturer of angiographic injectors. The firm has steadily grown and commercialized injectors for angiographic, CT and MRI applications; related disposables including syringes and administration sets, infusion pumps, and physiological monitors. Firm was acquired by Schering AG in the mid 1990s, which has in turn was acquired by Bayer Healthcare in 2006. Medrad, Inc has its headquarters location in Warrendale, PA. Medrad has three Pittsburgh area manufacturing sites, including the Indianola site that is the subject of this report.

INTERSTATE COMMERCE / JURISDICTION

Medrad, Inc. manufactures and distributes a variety of medical devices globally. They have a globally distributed sales and service network as described at their corporate web site. Medrad, Inc. has registered and listed the Indianola site as a medical device manufacturer. Medrad holds numerous 510(k)s. This site has design cognizance for Medrad's injector products, related disposable, infusion pumps and MRI targeted physiological monitors. This site also engages in physical manufacture of lower volume disposables, including Avanta hand controllers. Annual sales volume for Medrad, Inc. is estimated at about \$ (b) (4) (for all of Medrad, Inc, less than a quarter of that for this site).

INDIVIDUAL RESPONSIBILITY AND PERSONS INTERVIEWED

Upon arrival I presented credentials and a NOI to Mr. Timothy J. Anderson, Executive Director, Quality, and Medrad, Inc.'s formally designated Management Representative. Also present throughout the inspection was Ms. Julia Mitchell, Director, Quality Systems. Mr. Anderson and Ms. Mitchell provided most of the information obtained.

Mr. Sam Liang, as President and CEO, is reportedly ultimately responsible for the operations of Medrad, Inc. Medrad, Inc is in turn owned by Bayer Healthcare. Mr. Liang may be reached at: *Medrad, Inc.; 100 Global View Drive; Warrendale, PA 15086*

A copy of a current organizational chart for Medrad was collected, and is attached as Exhibit 1.

MANUFACTURING/DESIGN OPERATIONS

Manufacturing operations at the inspected site (Indianola facility) include manufacture and/or packaging of lower volume injector system disposables. Processing includes assembly / (b) (4) (b) (4) and packaging. Avanta hand controllers are also manufactured at this site. Design and development functions for Medrad products, including injectors and associated disposables, are also based at this facility. The Indianola site operates under the common Medrad, Inc. QMS and shares an MIS with the other Medrad sites. The Indianola site

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also has an operational micro lab. There are two other local area Medrad manufacturing sites (sterile disposables manufacturing in Saxonburg, PA and Electro-Mechanical assembly in O'Hara Township, PA), all of which share a common quality management system. The site reported upon herein has design cognizance over products produced at each of the other two sites. Medrad's executive leadership (and ultimate responsibility for all operations) is based at the Medrad HQ facility in Warrendale, PA.

REVIEW OF CORRECTIONS PROMISED IN RESPONSE TO WARNING LETTER

The May 17, 2011 Warning Letter issued to Medrad, Inc. cited the firm's failure to comply with the requirements of 21 CFR 806.10(a)(b) as they relate to field corrections undertaken to the firm's Avanta injection system and associated disposables. Additional details are available in the EIR covering the January 2011 inspection of this site. The previous inspections did not identify significant objectionable conditions relating to QSR requirements, as a result the current inspection was limited to verification of corrections specific to part 806 compliance.

I reviewed and collected copies of procedures that have been modified in response to the warning letter. Red-line versions of the relevant procedures were collected along with the approved revised procedures to better illustrate the changes made. Exhibit 2 is a copy of the modified level II Design Control procedure (red-line and revised/approved revision), Exhibit 3 is a copy of the modified level II CAPA procedure (red-line and revised), and Exhibit 4 consists of copies of the revised Situational Analysis procedure, which is the procedure which would invoke a requirement to conduct a field correction. Exhibit 5 consists of training records documenting completion of training on the new procedural requirements, along with a copy of the disseminated announcement of the changes. My review of these documents collectively revealed no departure from the requirements of 21 CFR Part 806. Significant changes include hard requirements for RA/QA review of any design change or NPD extended to released hardware, and removal of a language suggesting product needed to be violative to be potentially reportable under part 806.

Another correction undertaken by the firm in response to the Warning Letter involved retroactively reporting to PHI-DO their field actions involving transition to new design version disposables and software modifications to fielded injector systems for the Avanta family of injectors. The firm submitted documentation required by part 806 to PHI-DO in a letter dated June 08, 2011 to PHI-DO District Director Kirk Sooter. A copy of the narrative body of this document is attached as Exhibit 6, I have deliberately excluded voluminous attachments originally accompanying this submittal. The firm has been providing periodic updates on field action progress, and advised me during this inspection that domestic upgrades to new Avanta configuration have been completed as of 08/24/11.

The firm has not undertaken any modifications, changes or removals of fielded product since the last inspection.

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ADDITIONAL INFORMATION

As a result of PHI-DO's referral of the Jan 2011 EIR to CDRH, and OC and ODE's review of same, a dialogue between CDRH/OC and Medrad began relating to the numerous Avanta system design changes which have taken place since the product was initially cleared. These discussions resulted in Medrad deciding to file a special 510(k) for the Avanta system covering modifications made subsequent to initial clearance, and to temporarily suspend sales of Avanta injector systems. The firm has continued to distribute enhanced disposables to customers, but has agreed to advise customers that the enhanced disposables are still under review by FDA.

Other inspection activity included a review of adverse events reported by Medrad since the previous inspection, verification that there have been no additional field actions on any Medrad product since previous inspection, and walk-through review of Avanta hand-controller assembly process. These additional activities revealed no objectionable conditions. Discussion of complaints resulting in adverse event reports revealed two events for which Medrad investigation of cause is pending (Exception/Complaint numbers (b) (4)). Mr. Anderson and Ms. Mitchell expressed a willingness to update me on their investigation findings when available and local F/U is planned.

OBJECTIONABLE CONDITIONS AND MANAGEMENT'S RESPONSE

No significant objectionable conditions were noted, no FDA 483 was issued.

REFUSALS

No refusals were encountered.

GENERAL DISCUSSION WITH MANAGEMENT

During close-out discussions I was joined by Mr. Tim Anderson and Ms. Julia Mitchell. I advised the firm that the part 806 specific corrections they had made appeared appropriate. I told the firm I would not be issuing an FDA 483 as a result of the current inspection.

Mr. Anderson stated that Medrad was very anxious to have the warning letter closed out. He requested on behalf of Medrad that the firm receive a letter formally closing out the Warning Letter issues as soon as practical and appropriate subsequent to FDA review of corrections.

SAMPLES COLLECTED

None.

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VOLUNTARY CORRECTIONS

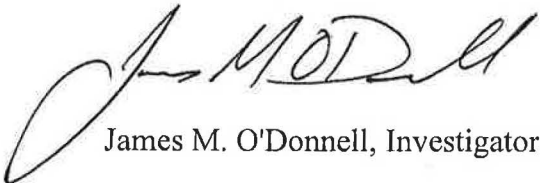
Procedural corrections have been established covering part 806 related issues as described earlier in this EIR. Firm has submitted CAR report and data covering the Avanta "upgrade" field action.

EXHIBITS COLLECTED

- 1) Copy of Organization Chart.
- 2) Copy of the modified level II Design Control procedure (red-line and revised/approved revision).
- 3) Copy of the modified level II CAPA procedure (red-line and revised).
- 4) Copies of the revised Situational Analysis procedure.
- 5) Copies of training records documenting completion of training on the new procedural requirements, along with a copy of the disseminated announcement of the changes.
- 6) Copy of firm's CAR notification to PHI-DO covering Avanta field actions (software upgrade and enhanced disposables) – without attachments originally accompanying submission.

ATTACHMENTS

- 1) FDA 482 Notice of Inspection



James M. O'Donnell, Investigator